



C-51 Reservoir Update

Lennart J. Lindahl, P.E.
Assistant Executive Director
South Florida Water Management District

Governing Board
Project & Lands Committee
February 10, 2016

C-51 Reservoir



- Located in western Palm Beach County, adjacent to SFWMD L-8 Flow Equalization Basin
- Capture and store excess surface water from the C-51 basin.

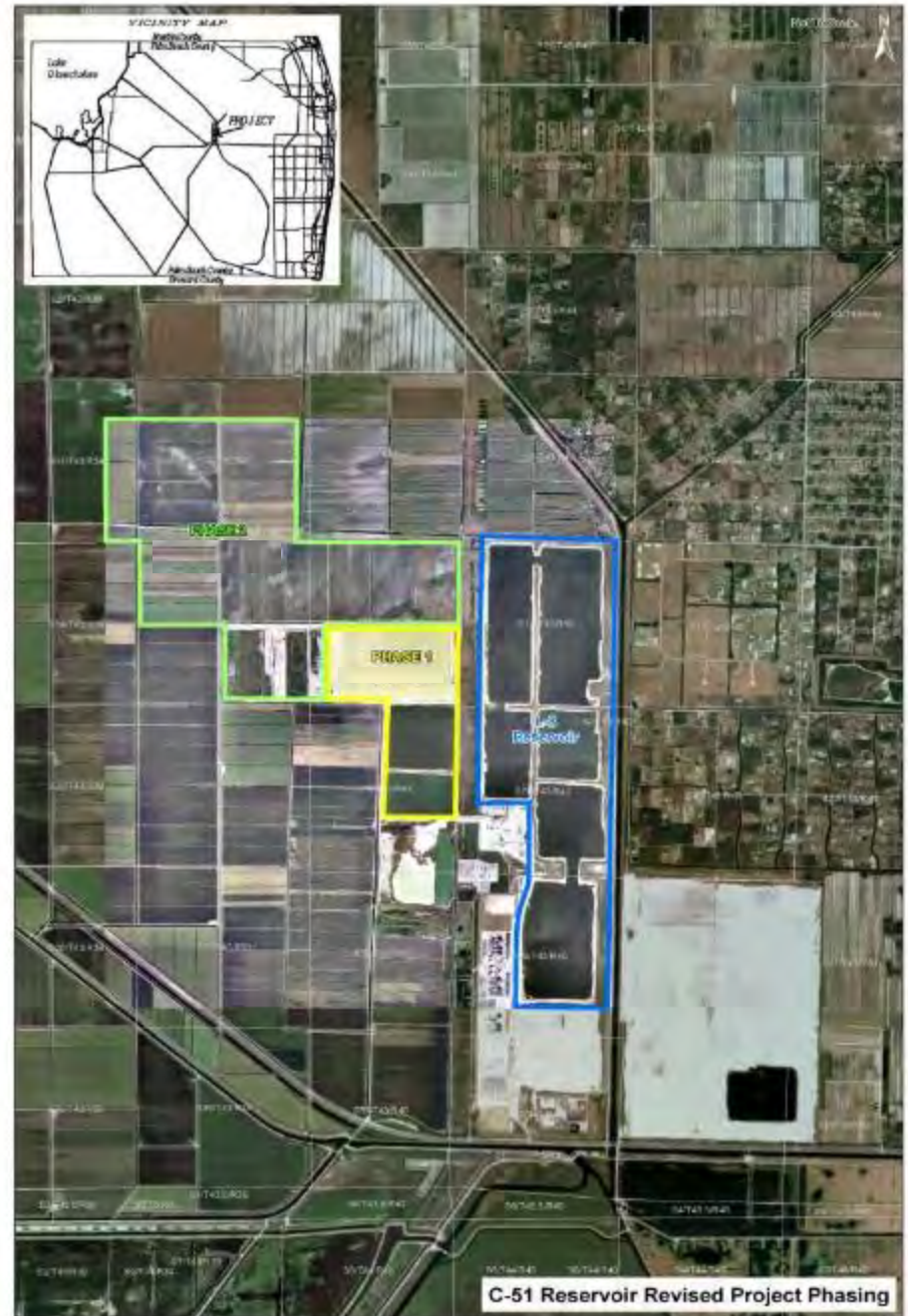
C-51 Reservoir Project Phases

■ Phase I

- 14,000 acre-feet of storage
- 2.5 years to construct
- 35 mgd for water supply
- Majority of excavation complete
- Estimated construction cost: \$161 million

■ Phase II

- 46,000 acre-feet of storage
- 115 mgd for water supply
- 7 years to construct
- Estimated construction cost: \$286 million



Project History

- Originally contemplated as part of CERP
- 2006 - Coordination of 7 Broward and Palm Beach water utilities and counties
- 2007-2008 - Partners cost-shared in initial preliminary design and cost-benefit analyses with policy and regulatory issues coordinated with SFWMD
- 2009 – 2013 – Regulatory, environmental, geotechnical, conveyance, governance, and financial considerations culminated in the Preliminary Design and Cost Estimate Report

C-51 RESERVOIR – PRELIMINARY DESIGN AND COST ESTIMATE – FINAL REPORT



Prepared By:
Lake Worth Drainage District
Palm Beach County
Broward County
South Florida Water Management District
February 2013

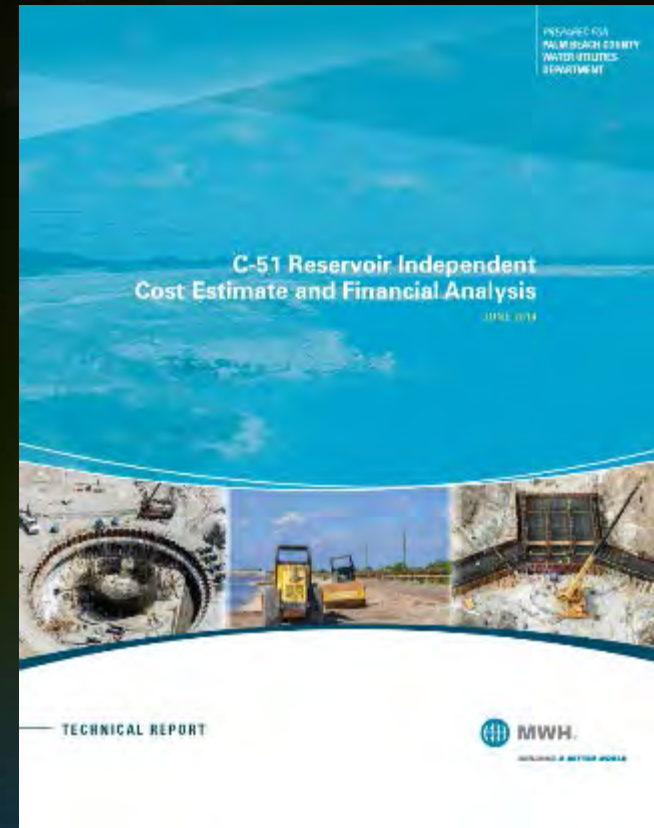
Project History

- 2013 – present – Governance and Finance Work Group created via resolution and adopted by participants

Broward County	Palm Beach County
Broward WRTF	Palm Beach WRTF
South Broward Drainage Dist.	Lake Worth Drainage District
Hallandale Beach	Boca Raton/Lantana
Coconut Creek	Palm Beach Gardens/Juno Beach
Town of Davie/Cooper City	Jupiter Inlet/Riviera Beach
Fort Lauderdale	Royal Palm Beach/Wellington
South Florida Water Management District	

Work Group's Additional Considerations

- Cost-efficiencies of joint L-8 FEB for infrastructure and operations
- Governance by Not for Profit with transfer to local governments upon project completion
- Concurrence with O&M by SFWMD
- Unanimous support for finalizing Work Group report and project advancement
- Short-term and long-term benefits relating water quality, water supply and flood control functions



Future Water Supplies

- Surficial sources limited
 - Regional Water Availability Rule approved 2007
 - Utilities have generally proposed offsets from reclaimed water and use of the Floridan aquifer to meet future needs
- C-51 Reservoir identified as a potential water supply project in the 2013 Lower East Coast Water Supply Plan Update

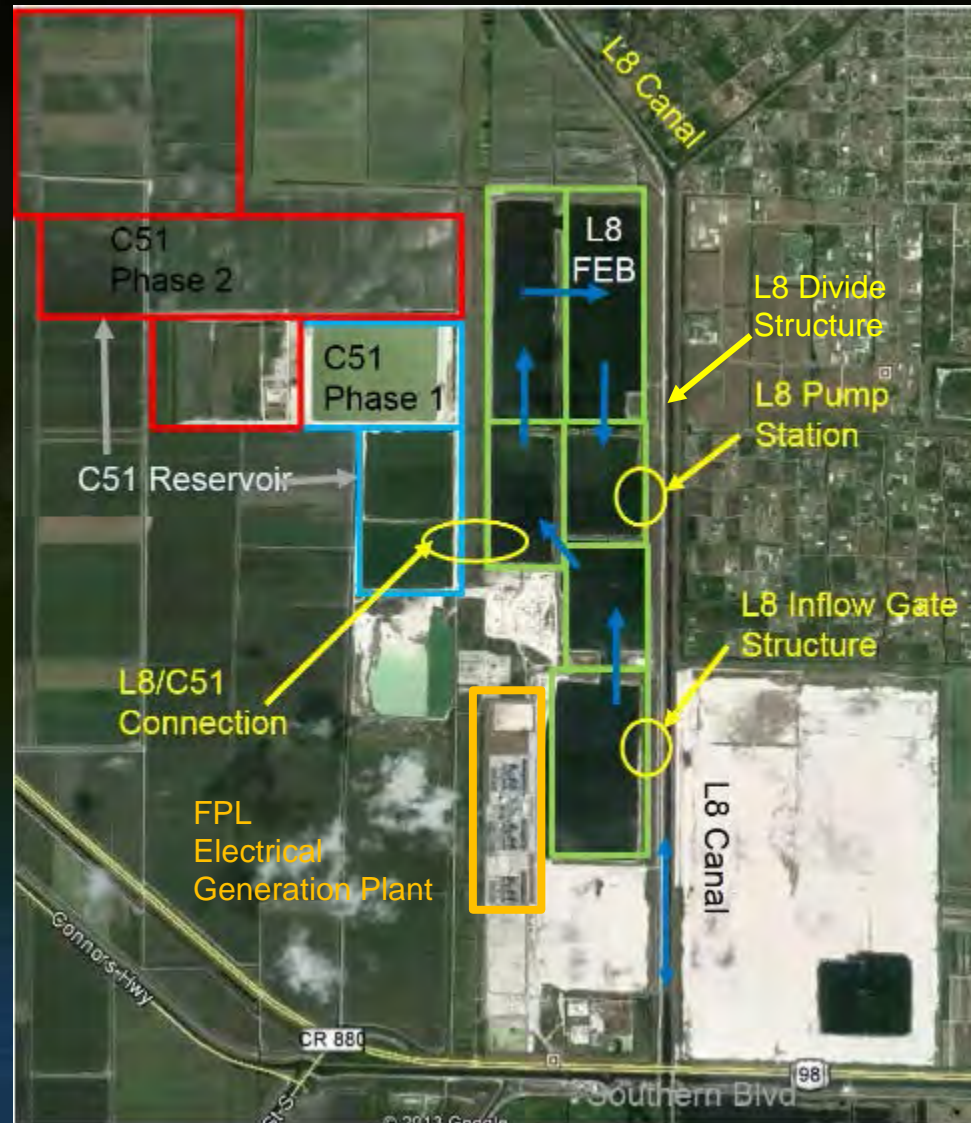


Project Benefits

- **Beneficial use of water lost to tide**
 - Capture excess flows in the C-51 basin
 - Decrease harmful releases to Lake Worth Lagoon
 - Alternative Water Supply
 - Additional storage has potential for flood relief
 - Recharge coastal wellfields
 - Sea level rise & saltwater intrusion benefits by maintaining higher canal stages
- **Location and geology**
 - Existing rock mine just north of C-51 canal and adjacent to the L-8 FEB
 - Same favorable geology
 - Shallower depth to avoid saline water at depth
- **Utilizes existing infrastructure for conveyance**
 - Some improvements (monitoring) for Phase I
 - Additional improvements necessary for Phase II



Operations in Conjunction with the L-8 FEB



Project Status

- Environmental resource and consumptive use permits have been issued by FDEP
- SFWMD and Palm Beach Aggregates (PBA) are discussing an O&M Agreement
- PBA has entered into a Conveyance System Agreements with Lake Worth Drainage District and will pursue others as necessary
- PBA seeks capacity allocation agreements with project beneficiaries to support construction of Phase I
- Under consideration as a project area component of the Loxahatchee River Watershed Restoration Project
- Option to consider this a pilot AWS development project per newly signed Water Bill



Thank you.